

# L<sup>A</sup>T<sub>E</sub>X Hands-on Workshop

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## Big Picture

This workshop was organized by Sharif Physics Student Scientific Association and targets undergraduate students in fundamental sciences. It is meant as an introductory course to the world of L<sup>A</sup>T<sub>E</sub>X to help students in typesetting their university assignments.

## Suggested Editors

- **Offline** Tex Studio
- **Online** Overleaf

## Syllabus

### 1. Intro to L<sup>A</sup>T<sub>E</sub>X

- A little bit of history
- Why L<sup>A</sup>T<sub>E</sub>X
- File Types (DVI, Tex, Log, PDF, ...)
- Editors

### 2. Basic Typesetting

- Special Characters (& ...)
- Basic Text Formatting (Italic, Bold, size, Roman, ...)
- Itemize
- Enumerate

- Sections, Chapters, Subsections, ...

### 3. Math Mode

- Inline Math Mode
- Variables
- Spacing in Math Mode
- Symbols, Integrals, Sums, Derivatives, ...
- Useful Environments

### 4. Figures

- `\includegraphics`
- Setting Size
- Positioning
- Captions

### 5. Tables

- `tabular`
- Positioning
- Captions

### 6. Referencing

- Configurations
- Labels
- URLs
- Files

### 7. Physics

### 8. Persian

- `xepersian` and documentation
- Setting up fonts (XB Niloofar)
- Basic Typesetting
- Localize
- Writing English with `xepersian`
- footnotes (Persian and English)

## Assistants

There are assistants available during the lecture who will help you with your errors.

- Ahmad Remezanpour
- Saleh Shamloo
- Erfan Rahbari

## Useful Links

- The Official L<sup>A</sup>T<sub>E</sub>X Forum
- Comprehensive T<sub>E</sub>X Archive Network: useful for finding packages and documentations
- L<sup>A</sup>T<sub>E</sub>X Wikibook: comprehensive and advanced L<sup>A</sup>T<sub>E</sub>X tutorial